The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

Thomas S. Burack, Commissioner

January 29, 2008

The Honorable Jim Ryan, Chairman
House Transportation Committee
Legislative Office Building, Room 203
Concord, New Hampshire 03301

Re: House Bill 1631 - relative to state purchase of biodiesel fuels

Dear Chairman Ryan and Members of the Committee:

The Department of Environmental Services (DES) is writing in support of House Bill 1631 relative to the purchase of biodiesel fuels for use as heating oil in state-owned buildings and for transportation purposes at state owned fuel depots operated by the Department of Transportation (DOT).

Through the Granite State Clean Cities Coalition (GSCCC), DES has been promoting the use of biodiesel, a domestically produced, cleaner burning, renewable diesel fuel replacement derived from animal or vegetable oil. Biodiesel is most commonly mixed with petroleum diesel fuel in blends of 20% biodiesel to 80% petroleum diesel, referred to as B20, or lower, but can also be used in its neat form, B100, in warmer months, or at lower blends such as a 5%, or B5 blend. Biodiesel can be blended with either transportation diesel fuel or with heating oil where it is termed "bioheat".

Biodiesel is not straight vegetable oil or animal fat, but rather is produced from these products through a chemical process called "transesterification" whereby the glycerin is separated from the oil. Biodiesel is produced to strict industry specifications established by ASTM International, the same organization that has established fuel quality specifications for diesel fuel, heating oil, gasoline, and other petroleum fuels. The environmental benefits of biodiesel and bioheat are summarized below and are, for the most part, proportional to the blend used.

Estimated emission reductions from use of biodiesel have been shown as follows[1]:

	B20	B100
Carbon Monoxide	12%	43%
Carbon Dioxide	15%	78%
VOCs	11%	56%
Particulates	18%	55%
Sulfates	20%	99%
Air Toxics	12 to 20%	60 to 90%
Mutagenicity	20%	80 to 90%

1 U.S. Department of Energy, "Biodiesel – Clean, Green Diesel Fuel", September 2001

Use of bioheat results in similar reductions of air pollutants, with the additional benefit of reduced emissions of oxides of nitrogen and mercury.

Despite the significant environmental benefits, biodiesel use in New Hampshire is still limited. The Biodiesel Study Commission, established by House Bill 689 (Chapter 0283, Laws of 2007) was tasked with identifying barriers and solutions to increasing production and distribution of biodiesel in New Hampshire. The Commission determined that the relatively low and unpredictable demand for the product makes it difficult for new distributors to enter the market and also hinders development of local production facilities. Lack of awareness about the benefits of biodiesel inhibits demand for the product by consumers.

To address these issues the Biodiesel Study Commission, in its report issued November 1, 2007, suggested that state government lead by example and help create a steady, predictable demand for this cleaner fuel through use of B5 biodiesel in all state-owned fueling depots for diesel transportation fuel, and B5 bioheat in all state-owned building that heat with oil. The use by state government would be advertised to the general public through GSCCC and other venues to help raise awareness and acceptance of biodiesel and bioheat as viable, cleaner petroleum fuel replacements for New Hampshire.

Passage of this bill would directly support two key initiatives of Governor Lynch. The 25 x '25 Initiative calls for 25% of New Hampshire's energy to come from renewable resources by 2025. Increased use of renewable biodiesel will be a key strategy in meeting this goal, and the state must begin supporting the creation of a local supply and in-state distribution infrastructure now in order to meet this goal. The second initiative is the work being done by the recently established Climate Change Task Force which is charged with updating the State's Climate Change Action Plan and establishing targets for future reductions in greenhouse gas emissions. Again, renewable fuels such as biodiesel will play an important role in meeting those goals.

Biodiesel has been used successfully through out the state for many years, most notably by the City of Keene and Keene State College who have been using B20 and higher blends since 2001, and Cranmore Mountain Resort, the first ski area east of the Mississippi to use biodiesel, has used B20 for snow grooming equipment since 2004. Numerous other fleets in the state are also using biodiesel blends, and the state currently stocks a B20 blend at the DOT fueling facility in Durham, where it is used by all diesel vehicles operated by the University of New Hampshire, school buses operated by the Oyster River Cooperative School District, and on a trial basis by the DOT. At least 6 heating oil companies in the state are now offering bioheat blends to their customers as well.

Thank you again for the opportunity to comment on HB 1631. Please call me at 271-3503 or Rebecca Ohler, Supervisor of the Mobile Source Section, at 271-6749 if you have any questions or would like further information.

Sincerely,

Thomas S. Burack
Commissioner

cc: Rep. David Borden, Chair HB 689 Biodiesel Study Commission
HB 1631 sponsors